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ABSTRACT

Elementary school teachers in experimental classrooms participated in inservice training programs which consisted of interpretation of information on Rasch profiles, individualization, and classroom climate. The teachers in the control classrooms received inservice training in the traditional topics only. Pupils in the experimental and control classrooms were administered the Comprehensive Test of Basic Skills (CTBS) as a pretest and posttest. Pupils in the experimental classrooms were also administered the Basic Skills Inventory (BSI), a Rasch scaled assessment instrument. Teachers in both groups submitted samples of classroom instructional and remedial plans for rating by a panel of judges on the Quality of Instructional Planning Scale (QIPS). Statistical analysis of the data on both groups indicated a significant difference. Teachers who received information based on Rasch scaled profiles prepared significantly better instructional and remedial plans than those who did not. Students in the experimental group achieved significantly greater gains in reading and mathematics than similar students whose teachers did not receive information based on Rasch scaled profiles. (DWH)

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CURRICULUM MAPPING AND INSTRUCTIONAL PLANNING FOR PUPIL ACHIEVEMENT

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ABSTRACT

CURRICULUM MAPPING AND INSTRUCTIONAL PLANNING FOR PUPIL ACHIEVEMENT

Thirty-seven third and sixth grade teachers were assigned to either an experimental treatment group consisting of traditional inservice plus interpretation of information on RASCH profiles, or a control group who received only the traditional inservice.

It was hypothesized that the teachers in the experimental group would receive higher ratings on their instructional plans than the control group teachers. It was also hypothesized that the pupils of teachers in the experimental group would achieve greater gains in reading and mathematics than control group pupils.

Significant differences in favor of the experimental group were obtained on both dependent measures.

CURRICULUM MAPPING AND INSTRUCTIONAL PLANNING

FOR PUPIL ACHIEVEMENT

STATEMENT OF THE PROBLEM

An unexpected but welcomed focus on the status of public education burst upon the scene during 1982-1983 in a series of published reports by bonafide commissions all addressing the educational standards and requirements of our public school graduates. (A Nation at Risk: The Report of the National Commission on Excellence in Education; The Twentieth Century Fund Task Force Report on Federal Elementary and Secondary Education Policy.)

The reports focused upon the lack of uniform standards, high expectations, and specific performance requirements. In answer to the questions that were raised by the commissions, state and local school boards set model graduation requirements that demanded measurable student performance. To meet the graduation requirements, teachers needed to address student proficiencies with teaching and remediation strategies which allowed each student maximum opportunity to achieve. Thus, the identification of cognitive skills expected to be mastered as well as those already learned was a primary concern to classroom teachers and school administrators.

In order to determine if such knowledge on the part of teachers would, in fact, be beneficial, the following research questions were posed in the study:

1. Will providing classroom teachers with information for curriculum mapping and instructional planning lead to better teaching and remedial strategies?

2. Will students of teachers receiving such information demonstrate greater cognitive growth on a standardized test than students of teachers not receiving such information?

The above research questions gave rise to the following specific hypotheses:

1. There will be a significant difference between the mean ratings on the Quality of Instruction Planning Scale of a group of teachers receiving specific class and individual profiles based on RASCH scaling and a group of teachers not receiving such information.

2. There will be a significant difference in mean gain in reading and mathematics between a group of pupils whose teachers received specific class and individual profiles based on RASCH scaling and a group of teachers not receiving such information.

SUBJECTS USED

Non-randomized experimental and control groups were formed among the student population within Los Angeles County. Individual schools used in the study were selected on a basis of a desire to participate and if a matched control site could be found within the geographical areas of the county. Schools were also matched by SES factors, California Assessment Program test scores, and school-community size.

A total of 37 classrooms at the third and sixth grade levels participated in the study in the areas of reading and mathematics. Eighteen of the classrooms (9 experimental and 9 control) were at the third grade level while nineteen (10 experimental and 9 control) were at the sixth grade level. The total sample of 1,018 students was comprised of 486 third graders and 532 sixth graders.

PROCEDURE

The study employed a non-randomized, intact groups design. Teachers in experimental classrooms participated in two, one-half day inservice training programs at the beginning of the school year and six, one-hour inservice periods throughout the year. The major content of the inservice consisted of the interpretation of the information obtained from the Individual Student Profiles and the Curriculum Match Reports of the Basic Skills Inventory, (BSI) a RASCH scaled assessment instrument developed by the Test Development Center of the Los Angeles County Office of Education. The teachers were also instructed in individualization, and classroom climate. Teachers in the control classrooms received the same schedule of inservice training in the traditional topics only.

Pupils in both experimental and control classrooms were administered the Comprehensive Test of Basic Skills (CTBS) as a pretest and posttest at the beginning and end of the year. Pupils in the experimental classrooms were also administered the BSI.

Teachers in both the experimental and control classrooms were periodically requested to submit samples of classroom instructional and remedial plans for rating by a panel of judges on the Quality of Instructional Planning Scale (QIPS).

RESULTS AND CONCLUSIONS

The null forms of the research hypotheses stated earlier were tested by applying a two-tailed t-test for the significance of the difference between uncorrelated means to the data obtained from both dependent measures in the study.

As can be seen from an examination of the data contained in Tables 1 and 2, the differences between the experimental and the control groups on both dependent measures were highly significant.

Based on the above results of the statistical analysis of the data, the following conclusions were drawn:

1. Teachers receiving information based on RASCH scaled class and individual profiles prepared significantly better instructional and remedial plans than teachers who did not receive such information.

2. Students in the third and sixth grade classrooms whose teachers received information based on RASCH scaled class and individual profiles achieved significantly greater gains in reading and mathematics than similar students whose teachers did not receive such information.

Table 1

Mean Scores on the Quality of

Instructional Planning Scale for the Two Groups

GROUP	N	MEAN	S.D.	MEAN DIFFERENCE	t
Experimental	19	10.23	2.90		
				4.07	3.88*
Control	18	6.16	3.44		

*p < .01

Table 2

Mean Gains in CTBS Reading and Mathematics

Grade Equivalent Scores

		Reading					Mathematics				
		Pre	Post	Gain	Diff	t	Pre	Post	Gain	Diff	t
Grade 3											
Experimental	$\bar{X}$	2.8	4.1	1.3			2.7	4.1	1.4		
n = 232	S	.70	.73				.89	.94			
					.3	2.88**				.4	3.39**
Control	$\bar{X}$	2.9	3.9	1.0			2.8	3.8	1.0		
n = 254	S	.83	.85				.71	.82			
Grade 6											
Experimental	$\bar{X}$	5.8	7.1	1.3			6.1	7.4	1.3		
n = 283	S	1.3	1.4				1.2	1.3			
					.4	2.09*				.4	2.11*
Control	$\bar{X}$	6.0	6.9	.9			5.9	6.8	.9		
n = 249	S	1.2	1.1				1.3	1.1			

*p < .05

**p < .01